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ABSTRACT

The following results are reported by this first stage of a longitudinal study of 2,994 new entrepreneurs' self-perceived odds for success and the relationship between entrepreneur background and those self-perceptions and between the nature of the new business and those self-perceptions: (1) women were considerably less optimistic about the probable success of their businesses than men; (2) there was some decline in optimism among both men and women as their ages increased; (3) entrepreneurs with less than a high school education were more optimistic than high school graduates, and those with some college or with bachelor's degrees were also more optimistic than high school graduates; (4) those who had started their firms were more optimistic than those who had inherited or purchased them; (5) those with franchised businesses were less optimistic; (6) those who disagreed with the statement "Making a comfortable living is enough success" were more optimistic; (7) those who thought their business was changing rapidly were more optimistic; (8) those who disagreed with the statement "In my business, operating controls and methods are in writing" were more optimistic. The label "optimist" or "pessimist" depended on the simple numerical difference between the entrepreneur's rating of his/her company's chances for success and the same entrepreneur's rating of the chances for success of other firms in the same industry. (A list of nine references is included.) (CML)

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OPTIMISTS AND PESSIMISTS: 2994 ENTREPRENEURS AND THEIR PERCEIVED CHANCES FOR SUCCESS

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OPTIMISTS AND PESSIMISTS: 2994 ENTREPRENEURS AND THEIR PERCEIVED CHANCES FOR SUCCESS

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SUMMARY

This paper examines how entrepreneurs perceive their chances for success shortly after they have become business owners. Data from 2994 entrepreneurs, most of whom had made substantial personal commitments, were analyzed. They perceived the odds for success for other businesses like theirs to be relatively good and the odds for their own businesses to be extremely high. Differences between optimists and pessimists were examined. Optimism was found to be systematically related to a number of characteristics associated with the backgrounds of the entrepreneurs and the nature of their businesses.

INTRODUCTION

When an entrepreneur starts or buys a business, many would perceive this to be a risky undertaking. The entrepreneur appears to have much at stake - capital, long hours invested, reputation, and foregone opportunities. Yet, despite the combination of having much to lose and the apparent poor chances for success, about 50,000 new corporations are established every month. In addition, many other entrepreneurs start unincorporated businesses or purchase existing firms.

This paper examines how entrepreneurs perceive their chances for success shortly after they have become business owners. Do they see themselves as undertaking risky ventures with marginal prospects, or are they confident that, come what may, they will succeed? What do they perceive as the chances for success for other businesses like theirs? Does degree of optimism relate to the entrepreneurs' backgrounds, the nature of their businesses or to factors which previous research suggests might be associated with success?

Previous Research

Past studies of business survival suggest poor prospects for long-term survival for most new businesses. (Some specialized groups, such as high technology firms, appear to have much higher likelihood of success.) Shapero reported on 13 previous studies of discontinuance rates for new firms or the

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population of existing firms (Shapero and Giglierano, 1982). One of the largest was a Department of Commerce study of all operating businesses started or transferred to new ownership during the eight years ending in 1954 (Churchill, 1955). It reported 46% discontinuing or changing hands within 1.5 years and 71% within 4.5 years. The most frequently quoted study is that by Dun and Bradstreet, which reported that 67% of new businesses discontinue within four years (Dun and Bradstreet, 1967). A number of focused studies, examining firms in specific industries and locations, have found discontinuance rates for non-technical firms ranging from 50% after two years to 35% after three years (Churchill and Giglierano, 1982: 121-122). However, Shapero, tracking firms through telephone company Yellow Pages, found somewhat lower discontinuance rates - 34% after two years and 50% after five years (Churchill and Giglierano, 1982: 117-118).

Variations in findings appear to reflect two factors. One is the sample of firms examined, whether it is a cross-section of all firms or a less diverse group such as manufacturing or high technology firms. Of particular importance is whether the sample is of new firms or a cross-section of established, more seasoned companies. A second point of difference relates to the definition of "discontinued." Many firms are sold, moved, or changed (merged, name changed, etc.). These changes complicate the question of determining whether "a business" has survived.

Even while recognizing these problems of sample selection and measurement, it is clear that the preponderance of evidence suggests that many businesses do not last very long with a given owner/manager.

Given the poor prospects for long-term new business survival, we might expect that entrepreneurs would exhibit a high propensity to take risks. They might be expected to see themselves as pursuing ventures in which the

odds might be long, but this would be compensated for by some chance of successful business ownership. However, Brockhaus, reviewing the literature on entrepreneurial risk-taking, found that most of the empirical evidence suggested that entrepreneurs are only moderate risk-takers (Brockhaus, 1982).

On the surface, it is difficult to reconcile the objective evidence on low survival rates for new firms, the entrepreneur's apparent moderate propensity to take risks, and the high rate of new firm formation. However, two other factors should be considered in understanding the process. One is an examination of how much entrepreneurs have at stake as they start ventures. Possibly, founders of part-time businesses or those requiring little of their own capital might view the process as similar to buying a lottery ticket, with little to lose and possibly much to gain. However, the more that is risked, the more important it is that the entrepreneur examine prospects for success with care. Thus, in any study of these entrepreneurial processes, we should examine the commitments being made.

The second factor to be examined has received surprisingly little attention. That is how entrepreneurs, in fact, perceive their own chances for success. If perceptions are examined shortly after the decision has been made, the psychological literature (cognitive dissonance theory) suggests that decision makers, such as entrepreneurs, "will cognitively bolster (i.e., exaggerate the attractiveness of) the chosen alternatives and derogate the rejected alternatives" (Abelson and Levi, 1985: 276). Furthermore,..."evidence of postdecisional bolstering has also been obtained in field experiments conducted in real-life settings in which people are observed in the course of making natural decisions - including betting at the horse races, casting a vote in an election, and choosing a job, all of which involve a relatively high degree of postdecisional conflict" (Janis and Mann, 1977: 314). Thus, we might expect entrepreneurs, after they have made a

commitment, to express substantial optimism as a way of bolstering the decisions they have made.

This paper examines commitments made by a sample of entrepreneurs and also presents objective data on their perceived odds for success. It then considers whether perceived chances for success seem to be influenced by the background of the entrepreneur or the nature of the business.

THE SAMPLE

This research is based upon what we believe to be the largest and most diverse sample of small business owners studied to date. A survey was administered in the spring of 1985 to members of The National Federation of Independent Business who reported that they had recently become owners of businesses.[1]

The initial sample was of 4814 business owners, but their dates of starting were less focused than intended, including some who became business owners in 1983 or before. Because perceptions of chances for success may change over time and with experience, this study examines only the 2994 entrepreneurs who became owners in 1984 or 1985. None had owned his or her firm for more than 17 months.

The sample is described more fully in Table 1. It seems broadly representative of small business in the United States, with entrepreneurs from virtually all industries and parts of the country. As noted, about 64% of these entrepreneurs became owners through starting their firms and about 30% through purchase.

Place Table 1 about here

ENTREPRENEURS' STAKES IN THEIR FIRMS

To what extent did this sample of entrepreneurs have substantial stakes in these new ventures? Examination of their investment of capital, of time, and of the time of family members helps to show the extent of their commitment. The distribution of capital invested is shown in Table 2. For the sample, 67% invested $10,000 or more and 51% invested $20,000 or more. The entrepreneurs (and their spouses and children) owned 100% of the business in 69% of the ventures. They owned 50% or more in 89% of the cases. Although we lack information on the personal financial positions of the entrepreneurs it is clear that they had non-trivial amounts of capital invested and that these businesses were primarily owner-managed.

Place Table 2 about here

Further evidence of the degree of commitment is shown by the investment of time by the entrepreneur. (See Table 3A.) The median entrepreneur reported devoting 60 hours or more per week to the venture and 75% reported a work-week of 50 hours or more. Time invested in the venture was not limited to the entrepreneur. About 48% reported that family members devoted unpaid time to the business. (See Table 3B.) For the sample, 25% of the entrepreneurs had 20 or more hours per week donated to the firm by family members.

Place Table 3A and 3B about here

It is clear from these profiles of commitment that these entrepreneurs had major stakes in their ventures. Financial investment, extremely heavy investments of time, donated time of families, and, we might assume, personal guarantees and foregone opportunities all were involved These were not investments "on the side," like lottery tickets, which, if lost, could be easily absorbed. Thus, there were incentives for the entrepreneurs to assess with care their chances for success.

PERCEIVED CHANCES OF SUCCESS

Against this backdrop of heavy commitments, how did the entrepreneurs perceive the chances of success for their businesses or for other businesses like their own? (Success, of course, may have different meanings. In this research, it was left for the entrepreneurs to define.)

Entrepreneurs were first asked, "What are the odds of any business like yours succeeding?" They were given 11 choices, ranging from 0 chances in 10 to 10 in 10. The results are shown in Table 4. They show perceptions of moderately strong chances for success. Of the entrepreneurs, 79% perceived odds of success of 5 out of 10 or better and 40% perceived odds of 7 out of 10 or better. Only 22% saw the odds for any business like theirs as being less than 5 out of 10. Given the objective evidence from earlier studies which suggested that many businesses do not survive the first few years, these perceptions seem moderately optimistic.

Place Table 4 about here

The entrepreneurs were then asked, "What are the odds of your business succeeding?" The results, shown in Table 5, display a remarkable degree of

optimism. Only 5% perceived their own chances for success as less than 5 out of 10. For the sample, 81% saw their chances at 7 out of 10 or better and a remarkable 33% perceived their chances as "dead certain," 10 out of 10.

Place Table 5 about here

A comparison of their own prospects for success with those for others in the same kind of business is revealing. (See Table 6A.) Only 5% perceived their own chances as poorer than for others in the same business. About 27% saw their chances as exactly the same as others, and 68% perceived their odds for success as better than others. The cross-tabulations are shown in Table 6B.

Place Tables 6A and 6B about here

Clearly, most of these entrepreneurs were very optimistic. They had much at stake, and they expected to be successful. The question of how we might reconcile this with the objective evidence on business success is considered later in the Conclusions section.

OPTIMISTS AND PESSIMISTS

Although most of these entrepreneurs were optimistic, there were variations. For instance, 5% saw their chances as less than 5 out of 10 and 33% saw their chances as 10 out of 10.

It may be that these differences in perceptions reflect underlying differences in the entrepreneurs, including the experience which they bring to

ventures. For instance, extreme optimists (10 out of 10) may be better prepared, with more education, more management experience, and more capital, and thus would be more likely to succeed. Alternatively, extreme optimists (10 out of 10) may be naive, ill-prepared, and not know what they are getting into.

A number of variables were identified which one might expect to be associated with perceived odds for success. These include variables relating to entrepreneurial background as well as the nature of the new firm. Personal background variables included sex, age, whether parents owned a business, education, marital status, management experience, previous organization, and reason for leaving previous organization. Variables relating primarily to the firm included industry, whether the entrepreneur founded the business, franchise status, whether there were partners, amount of capital invested, similarity to prior organization, and perceptions of market change relating to the new business. In addition, variables relating to goals and attitudes about the business, reflective of "craftsman" vs. administrative orientations, were also considered. In general, we would expect those factors associated with better preparation to be associated with more optimism about the success of the venture. Thus, more capital, prior business ownership and similar factors would contribute to a more optimistic view of success of the firm.

We might expect that objective predictors of success would be associated with the degree of optimism if entrepreneurs could make a "detached" assessment of the probable success of their ventures. However, given the amounts at stake, the importance of success, and the necessity for total personal commitment, there may be varying degrees of "entrepreneurial euphoria." This may lead some entrepreneurs to a substantial degree of post decisional bolstering and to be extremely confident despite poor preparation. To the extent that this is the case, it may be difficult to explain or predict

assessments of success with objective measures of preparation and market assessment.

The "objective" variables,and their expected signs are shown in Table 7. Variables reflecting better preparation should be positively associated with optimism. For certain variables a priori reasoning did not suggest any expected signs. This was the case with sex, age, marital status, and industry membership. Entrepreneurs whose parents had owned a business were expected to be better prepared and thus more optimistic. More education, higher levels of management experience, having come from a business organization, and having left the previous organization because of entrepreneurial plans or because of having left one's own business were all seen as being associated with better preparation; thus, for these variables we expected a positive association with optimism. In regard to the new business, starting a firm was seen as more risky than purchasing or inheriting, and being a franchisee was seen as less risky because of the support provided by the franchisor; thus, the expected signs were negative and positive respectively. Ventures with more capital, more partners and greater similarity to the prior organization were all viewed as having better prospects because of these characteristics; thus, we expected these to be positively associated with optimism. Entrepreneurs who expected their markets to grow rapidly were, of course, expected to be more optimistic; greater competitive pressures were likely to be associated with pessimism. A set of variables relating to goals and attitudes about the business was intended to determine the extent to which entrepreneurs had "craftsman" vs. "administrative" orientations; again, we were uncertain how these variables might relate to degree of optimism (Filley and Aldag, 1978).

Place Table 7 about here

RESULTS

Two dependent variables were available for analysis: first, the entrepreneur's probabilistic assessment of success on a 0 to 10 scale. The second measure compares perceived chances of success for the entrepreneur's own firm to those of any business like his. This measure is constructed by forming a simple difference between the firm's own odds of success and the odds for similar firms. Thus, an objective assessment of 7 (out of 10) might be optimistic or pessimistic depending on whether the entrepreneur feels that the odds of success for others is 7 in 10 (a difference of 0) or only 3 in 10 (a difference of 4).

To isolate the impact of the "preparation" factors on the determination of odds of success, regression analyses were performed. These incorporated the variables listed in Table 7 as predictors with each of the two measures of expected success discussed above as dependent variables.

The first analysis, that involving only the entrepreneurs' probabilistic assessments of success, produced disappointing results. It explained little of the variation in odds, and some variables exhibited counter-intuitive effects. An examination of the bivariate means of "odds of success" produced similar mean values whose differences were usually in the hypothesized direction, but were not significant. The variances were high in each cell, indicating a high diversity of opinion about the odds of success. Thus, for example, the average odds of success generally rose with increasing managerial experience, but the variance of each group mean was so large as to eliminate statistically significant differences. It seemed that extreme optimism scores (10 out of 10) were not only frequent in the sample (33%) but were also spread over all of the categories of each variable.

The second analysis used the dependent variable derived from the difference between the entrepreneur's perceived chances of success and the perceived chances of success for similar businesses. The resulting analysis, shown in Table 7, demonstrates a mixed pattern. For some variables, but not for all, optimism was positively associated with greater preparation.

In regard to personal background, women were noticeably less optimistic than men and there was some decline in optimism with increasing age. Surprisingly, entrepreneurs with less than a high school degree were more optimistic than high school graduates; however, as expected, those with some college and with bachelors' degrees were also more optimistic. Management experience did seem to be positively associated with optimism as did leaving the previous organization because of entrepreneurial plans.

In regard to the new firm, we had expected that those who started businesses would be less optimistic than those who became owner-managers of established firms through purchase, inheritance, or being brought in; however, starters were found to be more optimistic. It was also surprising that those with franchised businesses (100% of sales franchised) were less optimistic. As expected, there were strong relationships with expected market changes; expectations of increasing numbers of customers were associated with greater optimism and increasing numbers of competitors with greater pessimism. Of the questions relating to attitudes and goals, entrepreneurs who disagreed with the statement, "making a comfortable living is enough success" were more positive about their success. Disagreement with the notion that "my business is changing rapidly" was associated with greater pessimism, that is, those with rapidly changing businesses were more optimistic. These patterns suggest a positive relationship between an administrative orientation and optimism (Filley and Aldag, 1978: 584-585). However, those who disagreed with the statement "in my business, operating controls and methods are in writing" were

more optimistic, suggesting a counter-pattern with a craftsman orientation associated with optimism.

The R^2 was typical of cross-sectional studies (9%). However, there did seem to be systematic relationships between optimism and variables associated with the background of the entrepreneurs and the nature of the new businesses.

We are uncertain why the dependent variable based upon the entrepreneur's probabilistic assessment of success produced poorer results than that based upon the difference between that assessment and the odds for similar businessses. It may be that the latter variable dampened somewhat the effects of "entrepreneurial euphoria." Thus, those who assigned very high odds of success to their own businesses and also to similar businesses emerged with dependent variables which were more moderate than when their own odds were considered alone. More systematic and understandable relationships emerged with a dependent variable reflecting whether the entrepreneur expected to do better than similar firms.

CONCLUSIONS

The entrepreneurs in this sample clearly had much at stake in their ventures. They also projected extremely optimistic odds for success for their businesses, substantially in excess of the odds for other businesses like their own. Their perceptions might seem difficult to reconcile with the objective evidence on new business survival.

However, these findings clearly seem consistent with the psychological literature on postdecisional bolstering. The entrepreneurs in the sample had already made the decision to start their firms and had not, at least to that point, curtailed implementation or sought to reverse their commitments. Their strong optimism may have been an example of "activity (that) involves

developing new defensive attitudes and rationalizations that enable the decision maker to recommit himself" (Janis and Mann, 1977: 317).

The psychological makeup of entrepreneurs may also have played a role in how they perceived their prospects. Entrepreneurs have often been found to have high levels of internal locus-of-control beliefs, meaning that they believe that they can control their own destinies. Brockhaus has commented on this characteristic as it relates to entrepreneurial expectations, "Entrepreneurs have such a high belief in their ability to influence the achievement of business goals that the perceived possibility of failure is relatively low" (Brockhaus, 1986: 29).

Even though most of the entrepreneurs were very optimistic, there were variations in degree of optimism. Furthermore, these variations seemed to be systematically related to a number of characteristics of the entrepreneurs or the new business. Thus, perceived odds of success are systematically related to preparation and experience, but reflect a large "stochastic" component that cannot be explained with the available information.

What are the possible implications of these findings? Should entrepreneurs or their advisors try to dampen the optimism reflected here? Our view is that, before the entrepreneurial decision is made, it is important to try to keep entrepreneurial euphoria in check. Entrepreneurs should be sensitive to the danger that extreme optimism may blind them to flaws in their prospective businesses and lead to ill-considered ventures.

After the venture is started, the time corresponding to when these entrepreneurs were surveyed, the effects of entrepreneurial euphoria may be mixed. Extreme optimism may make it difficult for the entrepreneur to reappraise a venture and to decide whether to redirect it or possibly to close it down. There may be a process of entrapment, of "throwing good money after bad," as the entrepreneur escalates the commitment in order to preserve his or

her identity (Brockner, et al., 1986) However, there may also be positive benefits from this optimism. As the entrepreneur bolsters the decision already made, it may be easier to continue to make the great time commitments observed here. (Recall that the median entrepreneur was devoting more than 60 hours per week to the business.) Thus, buoyed by optimism, he or she may work to make the entrepreneurial decision turn out right and, in doing so, may actually increase prospects for success.

This is the first stage of a longitudinal study, in which the sample firms and their performance will be tracked for two successive years. It should then be possible to relate subsequent performance to the entrepreneurs' original projections of prospects for success as well as to variables normally thought to be related to entrepreneurial success.

Table 1. Sample characteristics[a]
n = 2994

Industry	
Construction	7%
Manufacturing and Mining	8%
Transportation and Communication	2%
Wholesale	4%
Retail	46%
Agriculture	2%
Financial	5%
Service	19%
Professional	5%
Other or Unknown	1%
Number of Employees[b]	
0 or no answer	3%
0.1 - 2.4	39%
2.5 - 4.4	29%
4.5 - 9.4	19%
over 9.4	10%
How Became Owner	
Started	64%
Purchased	30%
Inherited	2%
Other	4%

[a]All entrepreneurs became owners in 1984 or 1985. Data were gathered in May 1985.

[b]Number of full-time + 0.5 x Number of part-time employees.

Table 2. Amount of capital invested in business by time of first sale

Capital invested	Percent of sample
< $5,000	18%
$5,000 - 9,999	14%
$10,000 - 19,999	16%
$20,000 - 49,999	25%
$50,000 - 99,999	15%
$100,000 - 249,999	8%
$250,000 - 499,999	2%
$500,000 or more	1%
No answer	2%

Table 3a. Hours per week devoted to business by the entrepreneur

Hours per week	Percent of sample
1 - 49	23%
50 - 59	23%
60 - 69	28%
70 or more	24%
No answer	2%

Table 3b. Unpaid hours per week devoted by family members to the business

Hours per week	Percent of sample
0	52%
1 - 9	13%
10 - 19	10%
20 - 29	8%
30 - 39	4%
40 or more	13%

Table 4. The odds of any business like yours succeeding

Odds	
0 out of 10	*
1 out of 10	3%
2 out of 10	6%
3 out of 10	7%
4 out of 10	6%
5 out of 10	30%
6 out of 10	9%
7 out of 10	11%
8 out of 10	12%
9 out of 10	5%
10 out of 10	11%

*Less than 0.5%

Table 5. Odds of your business succeeding

Odds	
0 out of 10	*
1 out of 10	1%
2 out of 10	1%
3 out of 10	1%
4 out of 10	1%
5 out of 10	10%
6 out of 10	4%
7 out of 10	9%
8 out of 10	19%
9 out of 10	20%
10 out of 10	33%

*Less than 0.5%

Table 6a. Odds of success for your business versus any business like yours

Your Odds Poorer Than Any Business Like Yours	5%
Your Odds The Same As Any Business Like Yours	27%
Your Odds Better Than Any Business Like Yours	68%

6b. Cross-tabulation of odds of success for your business versus any business like yours[a]

Odds of Success For Any Business Like Yours	Odds of Success for Your Business[b] 0	1	2	3	4	5	6	7	8	9	10	
0	3	0	0	0	0	0	0	1	0	0	4	*
1	2	19	3	4	2	12	4	9	9	11	20	3%
2	1	7	12	4	4	20	10	21	25	22	35	6%
3	0	5	5	14	3	22	14	30	36	29	44	7%
4	2	1	1	2	10	10	15	29	48	22	22	6%
5	3	3	6	5	4	187	31	83	202	153	183	30%
6	0	0	1	1	5	6	28	23	60	60	58	9%
7	0	1	2	3	2	10	5	52	53	102	97	11%
8	1	1	2	0	2	5	3	7	98	95	129	12%
9	0	0	0	0	0	1	0	5	9	65	73	5%
10	1	1	0	0	1	4	1	2	6	5	280	11%
	*	1%	1%	1%	1%	10%	4%	9%	19%	20%	33%	

[a]Not including 139 entrepreneurs who gave no response to one or both questions.

[b]Odds of success out of 10 chances, e.g., 1 out of 10.

*Less than 0.5%

Table 7. Variables and their relationship to optimism

Predictor	Expected Sign	Coefficient
Sex (0 = Male, 1 = Female)		-.45**
Age		-.01**
Parents owned business	+	.06
Education		
Less than high school	-	.46*
High school		a
Some college	+	.25*
Bachelors degree	+	.41*
Some graduate school	+	.06
M.B.A. degree	+	.55
Other advanced degree	+	.15
Marital status		-.11
Highest previous level of management experience		
No subordinates		a
Supervised workers	+	.20*
Supervised managers	+	.25
Managed or owned own business	+	.38**
Previous organization		
Large business (> 1000 employees)		a
Medium business (100-999 employees)	+	.01
Small business (< 100 employees)	+	.08
Had own business	+	.06
Non-profit organization	-	-.11
Not in labor force	-	-.01
Reason left previous organization		
Job discontinued	-	.01
Laid off, fired, on strike	-	-.04
Quit without plans	-	-.25
Quit because of plans	+	.26*
Left, closed down, or sold own business	+	.33
No previous job or already with firm		a
Industry		
Construction		.28
Manufacturing		.14
Transportation		.08
Wholesale		a
Retail		.03
Agriculture		-.53
Financial services		.36
Non-professional services		.06
Professional services		-.05

Table 7 (cont'd.)

Predictor	Expected Sign	Coefficient
Started the business (versus purchased, inherited, or brought in)	-	.28**
Franchise status (100% of sales franchised)	+	-.09**
Number of partners	+	.04
Capital invested (8 categories of amount)	+	.04
Similarity to prior organization		
Different product or service than previous organization	-	-.03
Different customers than previous organization	-	-.04
Different suppliers than previous organization	-	.04
Expected market changes		
Number of customers		
Increase > 20%	+	.76**
Increase 11 to 20%	+	.59**
Increase 3 to 10%	+	.53*
Unchanged -2 to +2%		a
Decrease -3% or more	-	.23
Number of competitors		
Increase > 20%	-	-.34*
Increase 11 to 20%	-	-.31*
Increase 3 to 10%	-	.02
Unchanged -2 to +2%		a
Decrease -3% or more	+	.17
Disagreement with goals and attitudes		
Making a comfortable living is enough success		.25**
In my business, operating controls and methods are in writing		.07*
I am most comfortable in selling or handling technical problems rather than working on management issues		.02
My business is changing rapidly		-.08*

R^2 = .091 (significance .000)

*Significant at .10 level
**Significant at .01 level

[a]This category of this set of dummy variables was excluded for estimation. Each coefficient is interpreted as a deviation from the unobserved coefficient of the excluded category.

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